

## CLAIMS

- Sub 2
1. A dental implant having a head portion, a neck portion, and a threaded portion for contact with bone wherein said head and neck portions are provided with a smooth surface for blocking infection and said threaded portion is roughened to promote osseointegration with bone while leaving at least one thread adjacent said neck portion smooth and unroughened.
2. A dental implant of claim 1 wherein up to three threads adjacent said neck portion are left smooth.
3. A dental implant of claim 1 wherein a length of about 3 mm of said implant including said head, neck, and adjacent threaded portions is left smooth.
4. A dental implant of claim 1 wherein the head, neck, and threaded portions left smooth have a surface created by machining.
5. A dental implant of claim 1 wherein said implant is titanium or a titanium alloy and said roughness is created by a two-stop process in which the native oxide is removed by contact with an aqueous hydrofluoric acid solution and followed by etching of the resulting surface with a mixture of sulfuric and hydrochloric acids.
6. A dental implant comprising
- (a) a roughened bottom portion for facilitating osseointegration with bone;
  - (b) a smooth neck portion adjacent said roughened portion for contact with gingival tissue; and
  - (c) a smooth head portion adjacent said neck portion for receiving a dental restoration; wherein said roughened portion of (a) is threaded and at least one thread adjacent said neck portion is left smooth and unroughened.
7. A dental implant of claim 6 wherein up to three threads adjacent said neck portion are left smooth and unroughened.

8. A dental implant of claim 6 wherein the length of said head, neck, and smooth  
2 threads is a total of about 3 mm.

9. A dental implant of claim 6 wherein the head, neck, and threaded portions left  
2 smooth have a surface created by machining.

10. A dental implant of claim 6 wherein said implant is titanium or titanium alloy and  
2 said roughness is created by a two-step process in which the native oxide is removed by  
contact with aqueous hydrofluoric acid solution and followed by etching of the resulting  
4 surface with a mixture of sulfuric and hydrochloric acids.

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